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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,302	02/15/2002	Man-Wing Tang	104561	5563

23490 7590 01/29/2004

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EXAMINER

COLE, ELIZABETH M

ART UNIT PAPER NUMBER

1771

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/077,302

Applicant(s)

TANG ET AL.

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Examiner

Elizabeth M Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

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1. Claim 4 is objected to because of the following informalities: the period at the end of the claim is missing. Appropriate correction is required.
2. Applicant's election without traverse of claims 1-18, and 20 is acknowledged.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6-7, 12, 16, are rejected under 35 U.S.C. 102(b) as being anticipated by Ram et al, U.S. Patent No. 5,846,696. Ram et al discloses an adsorbent material comprising a zeolite which is held in a polymeric matrix. The polymer may comprise polyolefins which are inherently hydrophobic. The zeolite may comprise conventional zeolites. Ram discloses a method of using the adsorbent material to remove contaminants and water vapor from an enclosed space, including spaces which comprise a high relative humidity. See col. 2, lines 27-col. 3, line 17; col. 4, lines 7-57; col. 5, lines 13- col. 6, line 61.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, 12-14, 16-17, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ram et al, U.S. Patent No. 5,846,696. Ram et al discloses an adsorbent material as set forth above. Ram et al differs from the claimed invention

because Ram et al does not disclose the percent of organic contaminants which are removed from the gas and that the enclosed space is defined by a housing surrounding a disk drive. With regard to the percent of organic contaminants, Ram et al teaches that the amount and rate at which molecules may be adsorbed depends on the rate at which they contact the surface of the adsorbent particles and the speed with which they diffuse into particles after contact, which is related to the size of the particles.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized the amount and rate at which the contaminants are adsorbed through the process of routine experimentation by controlling the size of the particles as well as the pore size. With regard to the limitation that the enclosed space is a housing surrounding a disk drive, Ram et al teaches that the adsorbents are useful to protect electronic equipment. Therefore, it would have been obvious to have employed the adsorbent material to protect the enclosed space around a disk drive.

7. Claims 10-11, 15, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ram as applied to claims 1-9, 12-14, 16-17 and 20 above, and further in view of Dauber et al, U.S. Patent No. 5,593,482. Ram et al discloses an adsorbent material as set forth above. Ram et al differs from the claimed invention because Ram et al does not disclose an asymmetric structure, a structure comprising multiple layers or a structure comprising filter layers. Dauber et al teaches that adsorbent materials may be formed into multi-layered structures which may further comprise filter materials. Since the layers are all different the structure would inherently be asymmetric. Dauber teaches that incorporating the filter materials enhances the ability of the adsorbents to

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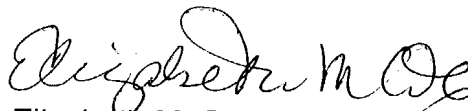
further entrap particulate materials. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated multiple layers including filter layers into the adsorbent of Ram. One of ordinary skill in the art would have been motivated to employ filter layers in order to allow particles to be trapped and filtered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Inquiries of a general nature may be directed to the Group Receptionist whose telephone number is (571) 272-0994.

The fax number for all official faxes is (703) 872-9306.



Elizabeth M. Cole
Primary Examiner
Art Unit 1771

e.m.c